

JURY TRIAL DEMANDED

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

MasterObjects, Inc. (“MasterObjects” or “Plaintiff”) hereby files its complaint against Facebook, Inc. (“Facebook” or “Defendant”). For its complaint, MasterObjects alleges, on personal knowledge as to its own acts and on information and belief as to all other matters, as follows:

I. NATURE OF THE ACTION

1. This complaint asserts causes of action for patent infringement under the Patent Act, 35 U.S.C. §§ 1 et. seq., including § 271.

II. PARTIES

2. MasterObjects is a corporation organized under the laws of the State of Delaware, with its principal place of business in Zeist, Utrecht, Netherlands.

3. Facebook is a corporation organized under the laws of the State of Delaware, with its principal place of business in Menlo Park, California.

III. JURISDICTION AND VENUE

4. This Court has subject matter jurisdiction over this matter by virtue of 28 U.S.C. § 1338(a).

5. This Court has general personal jurisdiction over Facebook because Facebook maintains regular and established places of business in Texas. Facebook has multiple offices in Texas, including multiple, large offices in Austin, and a data center valued in excess of \$1 billion spread across more than 100 acres in Fort Worth.

6. Further, this Court has specific personal jurisdiction over Facebook in this action pursuant to due process and the Texas Long Arm Statute, because Facebook has committed acts giving rise to this action within Texas and within this judicial District. Defendant also regularly does business or solicits business in this District and in Texas, and engages in other persistent

courses of conduct. The claims asserted herein arise out of or are related to Facebook's voluntary contacts with this forum, such voluntary contacts including but not limited to: (i) at least a portion of the actions complained of herein; (ii) purposefully and voluntarily placing one or more Accused Instrumentalities into the stream of commerce with the expectation that they will be used by consumers in this forum; or (iii) regularly doing or soliciting business, engaging in other persistent courses of conduct, or deriving substantial revenue from Accused Instrumentalities provided to individuals in Texas and in this District. Defendant has purposefully engaged in substantial, continuous, and systematic contacts within this District, and should reasonably expect to be sued in a court in this District. Given these contacts, the Court's exercise of jurisdiction over Defendant will not offend traditional notions of fair play and substantial justice.

7. Venue is proper in this Court by virtue of 28 U.S.C. § 1400(b), in that Facebook has committed acts of infringement in this District, and has regular and established places of business in this District.

8. Facebook maintains multiple offices in Austin, Texas, which it staffs with roughly 1,200 employees. *See* <https://www.bizjournals.com/austin/news/2019/09/04/first-look-facebook-headcount-swells-as-social.html> (last visited Jan. 30, 2020). Facebook recently opened an office at 607 W. Third St., Austin. This new office occupies 11 floors—accounting for 256,500 square feet of office space—and has room for 1,550 employees. Facebook also occupies four floors at 300 W. 6th St., Austin. *Id.* Facebook has additional offices within this District. *Id.* Facebook has maintained an office in Austin since at least 2010. *Id.* Facebook's offices in this District house employees from at least twelve different Facebook teams, including: (1) software engineering; (2) enterprise engineering; (3) infrastructure; (4) data & analytics; (5) legal, finance,

facilities & admin.; (6) sales & marketing; (7) global operations; and (8) design & user experience. See [https://www.facebook.com/careers/locations/austin/?locations\[0\]=Austin%2C%20TX](https://www.facebook.com/careers/locations/austin/?locations[0]=Austin%2C%20TX) (last visited Jan. 30, 2020). As of January 30, 2020, open Facebook positions in Austin included: engineering manager, global operations engineering; data engineer; hardware systems engineer; systems project manager, solutions; technology program manager; VP of partner operations; SMB marketing manager, global business marketing; and vertical marketing manager, e-commerce. Facebook has regular and established places of business in this District.

IV. BACKGROUND.

A. The Plaintiff MasterObjects and its Search Technology.

9. From the earliest days of Internet search, the search process has been hampered by what is known as the “request-response loop.” The user would type a query into a static input field, click a “submit” or “search” button, wait for the query to be sent to a remote database, wait for the result set to be returned to the server, wait for the server to build an HTML page, wait for the page to load into the browser, and then wait for the client window to be redrawn so that the result set could be viewed. Inherent in the “request-response loop” is the pragmatic reality that, if the result set did not match user expectations, the entire process had to be repeated, iteratively, until the results satisfied the user.

10. Plaintiff MasterObjects is a software company founded by Mark Smit. Mr. Smit is a named inventor of each of the patents asserted here. In 1999 and 2000, Mr. Smit was a young computer scientist working on relational databases and complex document search and retrieval issues for a technology company near Amsterdam. He found the technology frustrating and slow, and thought he could do better. Accordingly, he left his job and put his life savings in a new company founded to develop better computer search technology. He called the company

MasterObjects.

11. By the summer of 2001, Mr. Smit had conceived of a new computer search paradigm. He created a way to have instant search results provided as the user typed in characters in a search request. Mr. Smit's technique uses asynchronous communications between the user's computer and the server performing the search. In the old search model, the communication was "synchronous," *i.e.*, the server would sit idle until the user hit submit, whereupon the server would do its work, and then return the information to the client. As the client worked, the server waited; as the server communicated, the client waited.

12. To break this "request-response loop," Mr. Smit understood that he needed a new way to communicate that was asynchronous, *i.e.*, the client and the server could talk to each other within a session in a non-blocking way. In other words, the server and the client could communicate at the same time rather than the server waiting until the client finished and vice versa.

13. Mr. Smit also envisioned that the servers would store common prior search queries and related results. Storing this information, along with the asynchronous communication, allowed the computer system to quickly associate a few characters of a new request with a pre-existing model of the same request and results thereto, and provide suggested results right away. For example, as a user searching for information about an indoor arena in Manhattan types, "mad" becomes "madi," then later "madison sq," and then out pops search results for "madison square garden." As the user types in a query, the server provides increasingly relevant and responsive information (*e.g.*, information relating to Mad Magazine, then James Madison, then Madison Square Garden). These inventive techniques provide useful search results much faster and more efficiently than prior computer systems, improving

computer system functionality, and thereby providing a sophisticated digital search platform.

14. The patents asserted in this lawsuit embody Mr. Smit's inventions. The claimed features are not merely well-understood, routine, and conventional computer functions; rather they are novel and distinct improvements on the prior approaches known in the art. These novel claimed features improve the functioning of the computer system that implements them. For example, the asynchronous communication feature improves the operation of both the client computer and the server by allowing the two to communicate at the same time, thereby reducing latency and improving the timeliness of results. As another example, storing prior search queries and related results improves the operation of both the client computer and the server system by enabling common search requests and results to be retrieved quickly while utilizing fewer system resources to accomplish this task. As another example, displaying relevant search results in real time (*e.g.* while the user is entering the query) improves the operation of the client computer by enabling it to provide more accurate and timely results to users while bypassing the slow and frustrating "request-response loop" common in prior systems.

B. The Patents-In-Suit.

15. The patents asserted here are MasterObjects': (1) U.S. Patent No. 8,539,024 (the "'024 Patent"), entitled "System and Method for Asynchronous Client Server Session Communication;" (2) United States Patent No. 9,760,628 (the "'628 Patent"), entitled "System and Method for Asynchronous Client Server Session Communication;" (3) United States Patent No. 10,311,073 (the "'073 Patent"), entitled "System and Method for Asynchronous Retrieval of Information From a Server to a Client Based On Incremental User Input;" and (4) United States Patent No. 10,394,866 (the "'866 Patent"), entitled "System and Method for Asynchronous Client Server Session Communication," collectively, the "Patents-in-Suit."

16. Each of the Patents-in-Suit have been assigned to MasterObjects. Plaintiff MasterObjects is the sole legal and rightful owner of each of the Patents-in-Suit.

17. The '024 Patent was duly and legally issued on September 17, 2013. A true and correct copy of the '024 Patent is attached as Exhibit A. The '024 Patent covers sending a full input string. Under claim 1, for example, a client object sends query messages to the server system, with the term “query messages” representing the lengthening string of characters. *See* Claim 1, '024 Patent (“a server system, including one or more computers, which is configured to receive query messages from a client object . . . whereby the query messages represent the lengthening string . . .”).

18. The '024 Patent has been the subject of prior proceedings, including *MasterObjects, Inc. v. Google Inc.*, No. 4:15-cv-01775-PJH (N.D. Cal.), *MasterObjects, Inc. v. Yahoo! Inc.*, No. 3:13-cv-04326-JSW (N.D. Cal.), *MasterObjects, Inc. v. eBay Inc.*, No. 06824-JSW (N.D. Cal.), and *eBay Inc. v. MasterObjects, Inc.*, IPR2017-00740 (Pat. Trial & App. Board) (the “IPR”).

19. The IPR was an *inter partes* review involving '024 Patent claims 1-3, 6-7, 9, 12, 15-17, 21, 24-26, and 32-37. All of the '024 Patent's independent claims were involved claims. The Patent Trial and Appeal Board (“PTAB”) issued a Final Written Decision finding all of the involved claims patentable. A true and correct copy of the Final Written Decision is attached as Exhibit B. The PTAB found that Kravets (U.S. Patent No. 6,704,727) did not anticipate involved claims; that involved claims were non-obvious over Kravets; and that involved claims were non-obvious over the combination of Kravets and Bauer (U.S. Patent No. 6,751,603). The PTAB found that the '024 Patent's independent claims recite specific “usability test[s],” and that Kravets does not disclose or teach the claimed tests.

20. eBay Inc. appealed the Final Written Decision to the Federal Circuit. The parties to the *IPR* jointly moved to voluntarily dismiss the appeal. The Federal Circuit dismissed the appeal. An *inter partes* review certificate issued on June 11, 2019. The IPR certificate confirmed the patentability of the involved '024 Patent claims.

21. The '628 Patent was duly and legally issued on September 12, 2017. A true and correct copy of the '628 Patent is attached as Exhibit C.

22. The '073 Patent was duly and legally issued on June 4, 2019. A true and correct copy of the '073 Patent is attached as Exhibit D.

23. The '866 Patent was duly and legally issued on August 27, 2019. A true and correct copy of the '866 Patent is attached as Exhibit E. The '866 Patent is a continuation of the '628 Patent, and the '628 Patent is a continuation of the '024 Patent. The '073 Patent is related to the '866 Patent's great-grandparent.

C. The Infringing Facebook Instrumentalities.

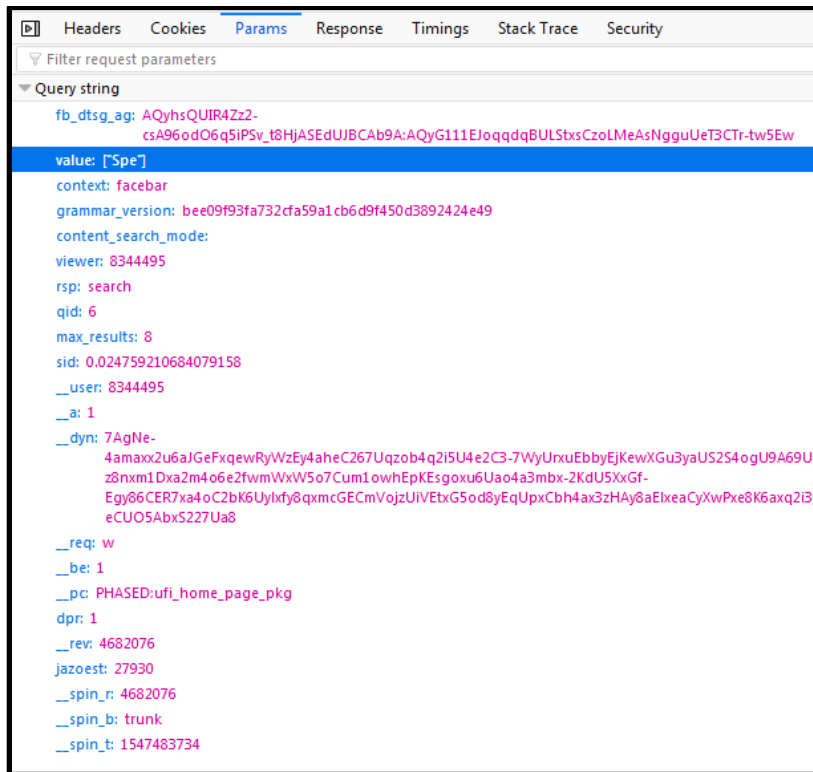
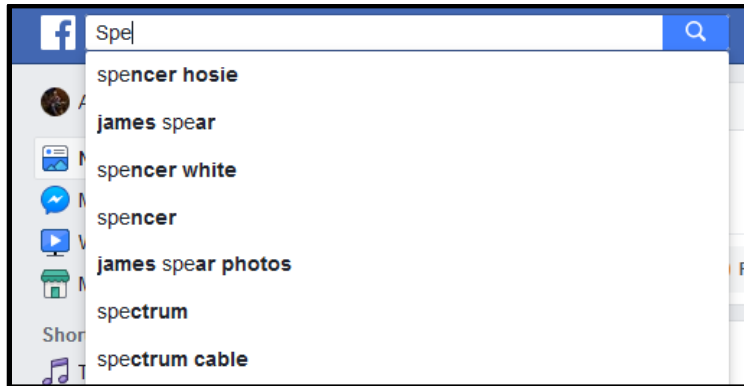
24. Facebook's predictive search, both for its full website and mobile website ("Facebook Predictive Search"), including at least the functionality known as Facebook Typeahead, as supported by Facebook's backend system known as Unicorn, infringes claims of the Patents-in-Suit.

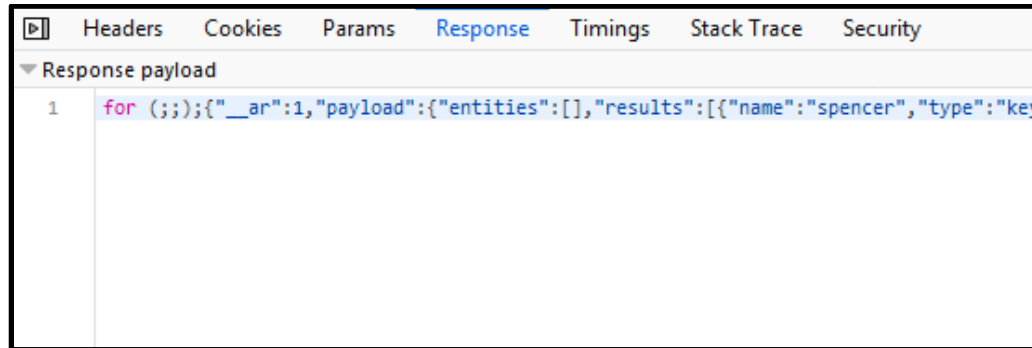
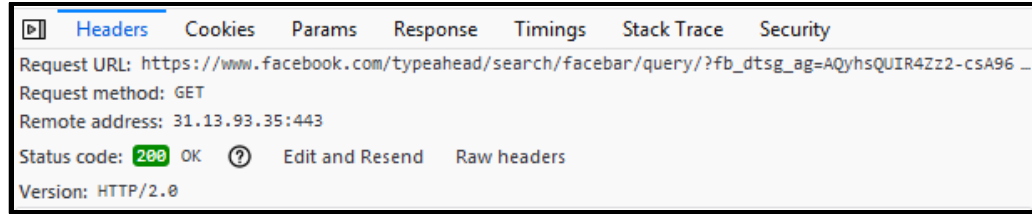
25. In addition, Facebook's predictive search for client applications and platforms it makes, sells, and/or distributes, including the Facebook applications for the iOS and Android mobile phone platforms ("Facebook Applications"), including at least the functionality known as Facebook Typeahead, as supported by Facebook's backend system known as Unicorn, infringes claims of the Patents-in-Suit.

26. Facebook Predictive Search and Facebook Applications (collectively the

“Accused Instrumentalities”) meet all the elements of claims of the Patents-in-Suit. Facebook infringes the Patents-in-Suit.

27. Exemplary illustrations of aspects of Facebook Predictive Search are below:





V. NOTICE.

28. The allegations of each foregoing paragraph are incorporated by reference as if fully set forth herein.

29. Facebook has been on constructive notice of the Patents-in-Suit. MasterObjects ceased product sales by at least January 2013. The Patents-in-Suit all issued after January 2013. More, MasterObjects' website states that its technology is protected by the '024 Patent. Further, prior to this action, the '628, '073 and '866 Patents were not asserted. MasterObjects has complied with, and/or MasterObjects need not comply with, 35 U.S.C. § 287(a).

30. At least by filing and serving this complaint, MasterObjects has given Facebook actual written notice of the Patents-in-Suit and of Facebook's infringement thereof.

VI. CLAIMS.

A. Infringement of United States Patent No. 8,539,024.

31. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 30 above.

32. Facebook infringes claims of the '024 Patent. Facebook, without authority,

makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '024 Patent. Facebook Predictive Search and/or Facebook Applications meet all of the elements of claims of the '024 Patent, including, all the elements of the '024 Patent, Claim 1. Facebook controls and benefits from each Facebook Predictive Search and/or Facebook Applications element that meets each limitation of at least '024 Patent, Claim 1. Facebook has been, is currently, and continues to, directly infringing at least Claim 1 of the '024 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Facebook Predictive Search and/or Facebook Applications, that practice the inventions disclosed in the '024 Patent.

33. As of the filing and service of this complaint, Facebook's infringement of the '024 Patent has been and continues to be willful and deliberate. Facebook's post-complaint filing, post-complaint service conduct has been egregious.

34. As a result of the infringement by Facebook, MasterObjects has been damaged, and will continue to be damaged, until Facebook is enjoined from further acts of infringement.

35. Facebook will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

B. Infringement of United States Patent No. 9,760,628.

36. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 30 above.

37. Facebook infringes claims of the '628 Patent. Facebook, without authority, makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '628 Patent. Facebook Predictive Search and/or Facebook Applications meet all

of the elements of claims of the '628 Patent, including, all the elements of the '628 Patent, Claim 13. Facebook controls and benefits from each Facebook Predictive Search and/or Facebook Applications element that meets each limitation of at least '628 Patent, Claim 13. Facebook has been, is currently, and continues to, directly infringing at least Claim 13 of the '628 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Facebook Predictive Search and/or Facebook Applications, that practice the inventions disclosed in the '628 Patent.

38. As of the filing and service of this complaint, Facebook's infringement of the '628 Patent has been and continues to be willful and deliberate. Facebook's post-complaint filing, post-complaint service conduct has been egregious.

39. As a result of the infringement by Facebook, MasterObjects has been damaged, and will continue to be damaged, until Facebook is enjoined from further acts of infringement.

40. Facebook will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

C. Infringement of United States Patent No. 10,311,073.

41. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 30 above.

42. Facebook infringes claims of the '073 Patent. Facebook, without authority, makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '073 Patent. Facebook Predictive Search and/or Facebook Applications meet all of the elements of claims of the '073 Patent, including, all the elements of the '073 Patent, Claim 1. Facebook performs each Facebook Predictive Search and/or Facebook Applications step that

meets each limitation of at least '073 Patent, Claim 1. Facebook has been, is currently, and continues to, directly infringing at least Claim 1 of the '073 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Facebook Predictive Search and/or Facebook Applications, that practice the inventions disclosed in the '073 Patent.

43. As of the filing and service of this complaint, Facebook's infringement of the '073 Patent has been and continues to be willful and deliberate. Facebook's post-complaint filing, post-complaint service conduct has been egregious.

44. As a result of the infringement by Facebook, MasterObjects has been damaged, and will continue to be damaged, until Facebook is enjoined from further acts of infringement.

45. Facebook will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

D. Infringement of United States Patent No. 10,394,866.

46. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 30 above.

47. Facebook infringes claims of the '866 Patent. Facebook, without authority, makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '866 Patent. Facebook Predictive Search and/or Facebook Applications meet all of the elements of claims of the '866 Patent, including, all the elements of the '866 Patent, Claim 1. Facebook performs each Facebook Predictive Search and/or Facebook Applications step that meets each limitation of at least '866 Patent, Claim 1. Facebook has been, is currently, and continues to, directly infringing at least Claim 1 of the '866 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Facebook Predictive Search and/or

Facebook Applications, that practice the inventions disclosed in the '866 Patent.

48. As of the filing and service of this complaint, Facebook's infringement of the '866 Patent has been and continues to be willful and deliberate. Facebook's post-complaint filing, post-complaint service conduct has been egregious.

49. As a result of the infringement by Facebook, MasterObjects has been damaged, and will continue to be damaged, until Facebook is enjoined from further acts of infringement.

50. Facebook will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

VII. PRAYER FOR RELIEF.

WHEREFORE, MasterObjects prays for entry of judgment as follows:

51. Judgment in MasterObjects's favor and against Facebook on all causes of action alleged herein;

52. That the Patents-in-Suit are valid and enforceable;

53. That Facebook has infringed one or more claims of each of the Patents-in-Suit;

54. That Facebook's infringement of the Patents-in-Suit was willful;

55. That Facebook account for and pay to MasterObjects all damages caused by the infringement of the Patents-in-Suit, which by statute can be no less than a reasonable royalty with respect to each Patent-in-Suit;

56. That the damages to MasterObjects with respect to each Patent-in-Suit be increased by three times the amount found or assessed pursuant to 35 U.S.C. § 284 and that Facebook account for and pay to MasterObject the increased amounts;

57. That this be adjudicated an exceptional case and MasterObjects be awarded its

attorneys' fees in this action pursuant to 35 U.S.C. § 285;

58. That this Court issue preliminary and final injunctions enjoining Facebook, its officers, agents, servants, employees and attorneys, and any other person in active concert or participation with them, from continuing the acts herein complained of with respect to infringement of the Patents-in-Suit, and more particularly, that Facebook and such other persons be permanently enjoined and restrained from further infringing the Patents-in-Suit;

59. That MasterObjects be granted pre-judgment and post-judgment interest on the damages caused to it by reason of Facebook's conduct at the maximum legal rates provided by statute or law;

60. That this Court award MasterObjects its costs and disbursements in this civil action, including reasonable attorneys' fees; and

61. That MasterObjects be granted such other and further relief as the Court may deem just and proper under the circumstances.

VIII. JURY DEMAND

62. MasterObjects demands a jury trial on all causes of action, claims, or issues in this action that are triable as a matter of right to a jury.

Dated February 5, 2020

Respectfully submitted,

/s/ Leslie V. Payne

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